

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-B

May 30, 2007

PAGE 1
000 B000000 03/31/2007
000 C000000 1258943
000 D000000 N
000 E000000 NF
000 F000000 Y
000 G000000 N
000 H000000 N
000 I000000 6.1
000 J000000 A
001 A000000 PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST
001 B000000 811-21409
001 C000000 6177427825
002 A000000 60 STATE STREET
002 B000000 BOSTON
002 C000000 MA
002 D010000 02109
003 000000 N
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007 C010100 1
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008 A000001 PIONEER INVESTMENT MANAGEMENT, INC.
008 B000001 A
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010 B000001 801-8255
010 C010001 BOSTON
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010 A000002 PRINCETON ADMINISTRATORS, LLC
010 C010002 PRINCETON
010 C020002 NJ
010 C030002 08543
010 C040002 9095
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.
011 B000001 8-12345678
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PAGE 2
011 C020001 MA
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011 C040001 1820
011 A000002 UBS WARBURG
011 B000002 8-022651
011 C010002 STAMFORD

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011 C020002 CT
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011 A000003 RBC CAPITAL MARKETS
011 B000003 8-045411
011 C010003 MINNEAPOLIS
011 C020003 MN
011 C030003 55402
011 C040003 4422
011 A000004 MERRILL LYNCH, PIERCE, FENNER & SMITH INC.
011 B000004 8-7221
011 C010004 NEW YORK
011 C020004 NY
011 C030004 10281
011 C040004 1201
011 A000005 JANNEY MONTGOMERY SCOTT LLC
011 B000005 8-462
011 C010005 PHILADELPHIA
011 C020005 PA
011 C030005 19103
011 C040005 1675
011 A000006 WACHOVIA CAPITAL MARKETS, LLC
011 B000006 8-99999
011 C010006 RICHMOND
011 C020006 VA
011 C030006 23219
012 A000001 PIONEER INV. MGMT. SHAREHOLDER SERVICES, INC.
012 B000001 85-00000
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012 A000002 AMERICAN STOCK TRANSFER & TRUST COMPANY
012 B000002 85-00000
012 C010002 BROOKLYN
012 C020002 NY
012 C030002 11219
012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)
012 B000003 85-00000
012 C010003 NEW YORK CITY
012 C020003 NY
012 C030003 10005
013 A000001 ERNST & YOUNG LLP
013 B010001 BOSTON
013 B020001 MA
013 B030001 02116
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PAGE 3
015 A000001 BROWN BROTHERS HARRIMAN & CO.
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020 C000007 0
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 022 B000001 13-3806694
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 022 A000002 LEHMAN BROTHERS, INC.
 022 B000002 13-2518466
 022 C000002 10168
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 022 A000003 B.C. ZIEGLER AND COMPANY
 022 B000003 39-0727640
 022 C000003 19421
 022 D000003 1160
 022 A000004 WACHOVIA SECURITIES, LLC
 022 B000004 54-0796506
 022 C000004 6784
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 022 A000005 UBS FINANCIAL SERVICES, INC.
 022 B000005 13-2638166
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 022 A000006 HERBERT J. SIMS & CO., INC.
 022 B000006 13-5213180
 022 C000006 16259
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 022 A000007 MERRILL LYNCH, PIERCE, FENNER & SMITH INC.
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 022 C000008 0
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 022 A000009 CITIGROUP GLOBAL MARKETS, INC.
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 022 A000010 J. GIORDANO SECURITIES GROUP
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PAGE 6

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070 P010000 Y

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070 P020000 N
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 070 Q020000 N
 070 R010000 N
 070 R020000 N

PAGE 7

071 A000000 85708
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 072 A000000 12
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PAGE 8

074 K000000 0
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 074 M000000 1539
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074	O000000	0
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080	A000000	ICI MUTUAL INSURANCE CO.
080	C000000	60000
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087	A010000	COMMON STOCK
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087	A020000	723762100
087	A030000	MAV
087	B010000	PREFERRED STOCK - SERIES A
087	B020000	723762209
087	C010000	PREFERRED STOCK - SERIES B
087	C020000	723762308
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088	B000000	N
088	C000000	N
088	D000000	Y
SIGNATURE	MARY KELLERMANN	
TITLE	ACCOUNTING MANAGER	